Building employee resilience: The impact of a workplace training seminar series designed to enhance positive psychological capabilities

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Abstract

Psychological resilience refers to the ability to respond adaptively. Although originally studied in the context of childhood trauma, resilience also appears to have benefits for employees. We investigate the impact of a structured workplace training programme building positive psychological capabilities (mindfulness, psychological flexibility, social support, time management, courage, optimism and mental toughness) believed to be associated with resilience. Forty-three local government employees participated in a seven-week seminar programme. Resilience was measured before, during and after the seminar series. Following the seminar series, resilience, mindfulness, and psychological flexibility increased. We conclude that employees could benefit through relatively short, inexpensive resource-based interventions around psychological resilience.

Introduction

Psychological resilience refers to the ability to respond adaptively to adversity (Stajkovic, 2006). The resilience literature has mainly focused on childhood post-trauma adaptation, although recent studies have investigated adult resilience in occupational contexts (Hourani, Council, Hubal, & Strange, 2011). Research has suggested that resilience mitigates the impact of stress and burnout on employees (e.g., Avey, Luthans, & Jensen, 2009), although few studies have evaluated the effectiveness of organizational programmes designed to enhance resilience. This study considers the application of a structured occupational resilience programme designed to enhance positive psychological capabilities. The advantages of a structured programme lie in the capacity for future replication and evaluation by multiple trainers across other organizational contexts.

In the positive psychology literature, resilience has been viewed both as a *component* of a set of positive psychological resources and as an *accumulation* of resources. The former perspective is typified by the model of Psychological Capital (Avey et al., 2009), which proposes that an individual's state of development consists of four positive resources: resilience, hope, optimism and general self-efficacy (Luthans & Youssef, 2004). Conversely, the latter perspective is reflected in the Conservation of Resources theory (Hobfoll, 2001), which proposes that resilience is based on the availability of positive resources (e.g., hope/optimism, cognitive flexibility and social support), and that stress occurs when these resources become depleted. Both perspectives are similar, however, in assuming that resilience and other positive psychological resources are interrelated. Given their presumed association, building resilience may be possible through a broad-based intervention designed to enhance a set of positive psychological capabilities.

Despite the ostensible benefits of resilience, little is known about how organizations can help employees to become more resilient. One potentially effective approach to building employee resilience involves the provision of *structured training* in workshops. Structured or manualised

training, which is now used frequently in clinical and counseling psychology training programmes, refers to instruction that is informed by a set of guidelines provided to the trainer. The guidelines will typically provide session outlines, suggested activities, worksheets and handouts, and advice for dealing with different client groups. The structured training approach has the advantages of standardising the quality of training and providing a theoretical basis for an intervention (Beutler, 1999). However, several concerns about the approach have been raised, including lack of flexibility in addressing client needs, reduction in therapist empathy and sensitivity, and the failure to accommodate new research evidence or innovations (Beutler, 1999; Henry, Strupp, Butler, Schacht, & Binder, 1993; Marshall, 2009). In an organizational context with a non-clinical population, the effectiveness of structured occupational resilience training is unknown.

It was felt that this programme would be particularly beneficial to local government employees, as public sector employees report higher levels of psychological injury claims and exposure to stressful interactions with the general public (Dias, 1997). A similar picture emerges for European workers who were employed in public administration, and other sectors with high level of public contact (Milczarek, Schneider & González, 2009). As is the case with Britain, mental injury claims are the most expensive of all work injury categories with the longest period of absenteeism (Blaug, Kenyon & Lekhi, 2007, Workcover SA, 2009). In Australia the average direct claim costs of $29, 901 AU (20, 272 EUR), with a mean period of twenty weeks absenteeism (Workcover SA, 2009). The most recent Australian Workplace Industrial Relations Survey (2010) indicates that Australian public sector workplaces report frequent organizational restructuring, employment insecurity, productivity intensification and higher levels of stress claims (WRC, 2012). Again a similar picture of organizational restructuring and intensification is evident in the British and European public sector (Bach & Stroleny, 2013, EMCC, 2013).

In this study, we evaluate the effectiveness of a structured training programme in increasing resilience.

The programme was designed to enhance a range of positive psychological capabilities believed to be associated with resilience, including mindfulness, psychological flexibility, social support, time management, courage, mental toughness and optimism. Workplace climate was also measured, to clarify whether the programme effects could be differentiated from the potentially confounding effects of work environment, including supervisory support and peer cohesion. Total project costs were approximately $22,000 AU (14,918 EUR), covering seminar presenters, programme development, weekly coaching sessions for all managers and supervisors as well as programme evaluation and measures. The programme was available to approximately sixty-five staff and ran over eight weeks. The project costs equated to approximately $338.50 per staff member.

Method

Brief description of the programme

The programme consisted of seven, one-and-half-hour seminars which were attended by all employees, including workplace managers. Seminar topics included mindfulness, psychological flexibility, occupational social support, occupational time management, courage (or overcoming avoidance), mental toughness (or persistence) and optimism (or happiness). In addition to the seminars, workplace managers were also provided with short coaching sessions following each seminar topic. These coaching sessions address how managers were going to reinforce employees' practice of seminar techniques.

Programme Design

The researcher conducted detailed interviews with ten workplace supervisors, managers and employees about the history, work organization, workplace climate and social relationships within the directorate. These interviews provided examples and material for customising programme delivery, language and content for specific resilience topics. The training programme was specifically designed for this cohort.

Training programme participants then completed the Resilience at Work Scales (RAW, Winwood, Colon &

McEwen, 2013) two weeks before the seminars commenced, three weeks after commencement, five weeks after commencement, and two weeks post-programme completion. The Moos Work Environment Scale (MWE, Insel, Moos & Press, 1974) was administered two weeks before programme commencement and two weeks after its completion. Utilisation surveys were provided at the beginning of each seminar to provide baseline data, and were re-administered at the beginning of subsequent seminars. Post-utilisation data were collected two weeks after programme completion. As well as being part of the training cohort, all ten workplace managers received weekly coaching in team goal-setting to facilitate practice of the range of techniques taught in each seminar.

Each seminar was based on a topic concept with three objectives. The topic content was delivered through a twenty minute lecture, facilitated group discussion and a small group exercise around workplace practice. All seminars included short reviews of previous seminars, followed by the introduction of new topics. Seminars were approximately one-and-a-half hours in length, and were conducted onsite in staff training facilities. *Mindfulness* was the first seminar topic, and was based on the principles of acceptance and commitment therapy (Hayes & Pierson, 2005). Seminar objectives included learning about mindfulness techniques for self-regulating affect and cognition, working mindfully, and focusing on the five senses.

Psychological flexibility was the second topic, and was based on principles of rational-emotive behavioral therapy (Ellis, 2011). Seminar objectives included education about the contribution of psychological flexibility to self-efficacy, and learning how to apply psychological flexibility to real life problems (e.g., acceptance, focusing on evidence, developing multiple perspectives and managing behavioral responses).

Occupational social support was the third topic. Seminar objectives included education about the contribution of social support to well-being, and identifying and overcoming barriers to social support (Cacioppo, Reis, & Zautra, 2011; Knox-Haly, 2009). *Occupational time management* was the fourth topic.

Objectives included education about the distinction between what can and cannot be controlled, using personal values to determine priorities, and strategies for protecting these priorities.

Courage (or the cognitive appraisal of fear and reduction of avoidance) was the fifth topic. Objectives included education about the relationship between fear and avoidance, helping participants to increase their approach behaviours and reduce avoidance (Avey et al., 2009). *Mental toughness (and persistence)* was the sixth topic. This topic corresponded to Avey et al.'s (2009) definition of hope: "a positive motivational state that is based on an interactively derived sense of successful agency (goal directedness) and pathways (planning to meet goals)" (p. 681). Objectives included educating participants about personal sources of mental toughness (i.e., action and effort), developing strategies for persistence, and overcoming procrastination and pessimism.

Optimism (and happiness) was the topic of the seventh seminar. Objectives included education about the components of optimism and happiness, and strategies for building optimism. These strategies were based on Schneider's (2001) research, which highlighted the importance of self-forgiveness, appreciation for the present (gratitude), and recognising opportunities for the future (in terms of self-efficacy for one's abilities).

Participants

The initial sample consisted of 43 respondents from a community services directorate of a local government authority. All employees from the community services directorate were invited to attend on a voluntary basis. Approximately two-thirds of the workforce participated in the programme, and reasons for non-participation included conflicts with part-time work, clashes with rostered days off or annual leave, as well as the need to maintain minimum staffing levels. This directorate was selected as it had experienced a number of significant changes in management and organizational structure. Employees in this directorate had also requested access to a programme which would build their mental health and well-being. This request arose in the context of staff needing to deal

with challenging behaviour from customers.

Participants were employed as community librarians, welfare officers, youth workers and arts project workers. These respondents' ages ranged from 22 to 65, with 34 female respondents and seven male respondents. Unfortunately the analysis could not consider gender differences due to the small number of male respondents. Twenty-five respondents held Bachelor degrees or higher university qualifications, whilst the remainder possessed vocational level qualifications. The post-intervention sample consisted of 30 respondents (twenty-six female respondents and four male respondents) with complete data. There was partial data for an additional 24 respondents who joined the programme at different points after the programme had started. This resulted in an unusual situation of more participants joining the programme as it progressed. Unfortunately the incomplete nature of data for these respondents meant that this data could not be used. There were no significant demographic differences between those that completed the programme and those that did not. Data was not systematically collected on why participants chose to join the programme, but several participants volunteered that they were able to join the programme because they had returned from leave, or had heard positive feedback about the programme content. Ten supervisors and managers attended weekly individual coaching sessions around goal-setting to promote daily practice of seminar concepts in the workplace. These managers were also seminar participants.

Measures

Resilience was assessed using the RAW (Winwood et al., 2013). The RAW is 45-item scale which measures use of resilience building behaviours and attitudes. Exploratory and confirmatory factor analyses have demonstrated the conceptual adequacy of the RAW, and Australian norms based on 510 Australian workers from a range of occupations have been developed for this scale (Winwood et al., 2013). The RAW demonstrates moderate correlations with scales measuring recovery from Occupational Fatigue Exhaustion and Recovery Scale, the General Health

Questionnaire and the Utrecht Engagement Scale (McEwen & Winwood, 2001). The RAW uses a seven point Likert scale (responses scored from 0 to 6) with options ranging from strongly disagree to strongly agree.Sample items of the RAW include: a) “I have important core values that I hold fast to in my worklife”; b) “I am able to change my mood at work when I need to”; and c) “I know my personal strengths and make sure I use them regularly in my work”.

Respondents were also asked to complete utilisation surveys for the capabilities being discussed in seminar topics. For example, participants were asked how often the applied the practice of mindfulness. Each utilisation questionnaire asked participants to rate how frequently they used each resource or resilience building behaviours. Utilisation data for resilience behaviours to be covered in the seminar began to be collected immediately prior to delivery of the relevant utilisation data and continued to be collected for each subsequent week of the programme. This enabled the researchers to collect evidence on pre-intervention levels of resilience building practices, and collate weekly frequencies based on reports of daily usage. Workplace climate (i.e., supervisor support and peer cohesion) was measured using the Moos Work Environment scale (Insel, Moos, & Press, 1974). The MWE (Insel et al., 1974) measures supervisory support, peer cohesion (closeness with work colleagues), opportunity for autonomous decision-making in one’s role, opportunity for control over one’s role, work pressures, clarity about one’s role and task orientation (concentration on work tasks to the exclusion of workplace relationships). The MWE was included to help the researchers determine whether changes in resilience could be attributed to programme practices, and that shifts in resilience levels were not an artifact of changes in the work climate.

Data analysis

Changes in each capability were assessed using latent growth modeling (LGM). LGM is a longitudinal data analysis technique, which can be used to analyse datasets with three or more repeated assessments. For each individual, LGM estimates a growth curve comprising a latent intercept and

slope, representing the individual's initial standing on the first assessment and rate of change over time. Mean intercepts and slopes are then calculated across the sample. LGM has several advantages: a) it is flexible; b) can model both linear and non-linear change over time; c) can estimate the relationship between people's initial standing and their rate of change on each dimension; and d) is robust enough to cope with missing data points in estimating individual growth trajectories.

An initial LGM was tested for utilisation data for each seminar topic this included the intercept (or how often participants were using a particular resilience building practice before receiving any formal training) and a linear slope (this measured the increase or decrease in a particular resilience practice after the participant had received training). A quadratic slope was introduced if the initial model fitted poorly (as was the case with mindfulness). For each model, the intercept was located at the first point of data collection (e.g., for psychological flexibility, the intercept was fixed at Week 3 of the measurement period). The utilisation data collected immediately before participants attended a seminar on a given topic represented a pre-intervention measure, and became the first point in the latent function curve. The linear and quadratic slope variables were scaled in terms of weeks. For variables with only two assessments (including optimism, supervisor support and peer cohesion), repeated-measures analysis of variance (ANOVA) was used to assess changes in practice levels following participation in the training programme.

LGM analyses were conducted in Mplus 7.0 (Muthén & Muthén, 2012), using the Bayes estimator. Model fit was assessed by inspecting the 95% credible interval for the difference between the observed and replicated chi-square values. For each analysis, the confidence interval included zero and the posterior predictive p-value was non-significant, indicating each model provided a good fit to the data.

Results

The means and standard deviations of each variable are presented in Table 1. Examination of these means for the RAW resilience scores and utilisation

rates for resilience building practices revealed that over the duration of the training, resilience, mindfulness and psychological flexibility increased, as indicated by the significant positive latent slope means. However, the quadratic slope mean for mindfulness was both negative and significant, indicating that the rate of growth slowed over time.

Table 2 shows slopes were non-significant for social support, time management, courage and mental toughness, indicating these characteristics did not change substantially over the course of the programme. Optimism did not change significantly from baseline, $F < 1$. The latent intercept and slope for each variable were negatively correlated, suggesting that the programme was more beneficial for people who were low on each variable at the beginning. The results of each LGM, including the latent intercepts and slopes, are presented in Table 2.

With respect to the workplace climate measures, supervisor support remained largely unchanged from pre- to post-intervention, $F(1, 20) = 1.95$, $p > .10$, whereas peer cohesion decreased, $F(1, 20) = 6.74$, $p < .05$.

This suggests that participants increased their use of mindfulness and psychological flexibility techniques, and that this was associated with increased levels of resilience. The lack of change in the workplace climate measures indicates that improved resilience levels were not a result of changes in leadership, job autonomy, work pressure, opportunities for control over one's work or changes in job clarity.

Table 1: Mean scores (and standard deviations) for RAW scores and utilisation of resilience practice across the weeks of the programme

	Two weeks pre-seminars	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Two weeks post-seminars
Positive resources								
Resilience (RAW scores)	83.2 (13.2)	n/a	86.0 (11.4)	n/a	84.7 (10.7)	n/a	n/a	89.5 (10.4)
Mindfulness	4.8 (6.2)	6.0 (5.7)	7.2 (5.7)	8.4 (5.8)	8.1 (5.4)	9.3 (5.5)	9.5 (7.1)	9.2 (6.1)
Psychological flexibility	n/a	9.3 (6.0)	7.3 (4.8)	8.5 (5.2)	8.5 (5.3)	9.3 (5.2)	9.1 (5.8)	9.1 (6.3)
Social support	n/a	n/a	7.1 (4.2)	6.9 (5.1)	5.9 (3.8)	6.2 (4.0)	7.0 (4.7)	4.9 (3.1)
Time management	n/a	n/a	n/a	12.6 (7.0)	8.7 (4.7)	10.9 (6.0)	9.2 (5.3)	10.9 (6.0)
Courage	n/a	n/a	n/a	n/a	4.8 (3.6)	5.0 (2.8)	7.6 (5.1)	6.4 (4.4)
Mental toughness	n/a	n/a	n/a	n/a	n/a	7.2 (4.0)	8.2 (4.7)	8.5 (4.0)
Optimism	n/a	n/a	n/a	n/a	n/a	n/a	8.8 (0.7)	9.7 (0.9)
Workplace climate								
Supervisor support	52.8 (15.8)	n/a	n/a	n/a	n/a	n/a	n/a	56.6 (8.6)
Peer cohesion	60.1 (10.4)	n/a	n/a	n/a	n/a	n/a	n/a	57.4 (5.5)

Table 2: Results for practice levels of resilience capabilities

	Latent Variable Means			Correlations
	Intercept	Linear slope	Quadratic slope	Intercept and linear slope
Resilience	82.96***	0.71**	n/a	-.70**
Mindfulness[a]	4.91***	1.42**	-0.11*	-.62**
Psychological flexibility	7.74***	0.26*	n/a	-.28
Social support	6.71***	-0.22	n/a	-.65*
Time management	10.98***	-0.12	n/a	-.52
Courage	5.09***	0.37	n/a	-.01
Mental toughness	7.29***	0.31	n/a	-.70*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

[a] For mindfulness, the correlation between the intercept and quadratic slope was .54 ($p < .05$), and the correlation between the linear and quadratic slopes was -.97 ($p < .001$).

Discussion

The purpose of this project was to evaluate a structured training programme to build occupational resilience. The results indicated that resilience levels did increase over the course of the training. Moreover, we found that the training increased levels of mindfulness and psychological flexibility. Overall, the findings of this study suggest that targeted improvement in particular psychological capabilities or resources through structured training leads to increased employee resilience, and that a focus on mindfulness and psychological flexibility may be especially promising. Training in these areas may provide individuals with greater skill in cognitively anchoring attention and emotional reactions through mindfulness, and in reframing perceptions of objective circumstances into more helpful cognitions. These strategies may also alleviate entrenched negative automatic thoughts and affect states, thereby

helping employees to become more resilient to adversity.

While resilience ultimately increased over the seminar series, we found that the training had a differential impact on each capability. We found that social support, time management, courage, mental toughness and optimism did not change substantially from baseline levels. It is possible that these factors are less amenable to training, because they are more constrained by each employee's circumstances.

For example, social support may depend on colleagues' willingness to provide assistance, time management and autonomy depends on workload, courage and mental toughness depend on the availability of opportunities to face fears and apply persistence. Interestingly the levels of peer cohesion decreased over the course of the programme. There is a well established literature associating social support seeking with emotion focused coping, as well as reduced occupational stress (Knox-Haly, 2009). One possible explanation for decreased peer cohesion is that increased use of mindfulness and psychological flexibility were helping to tackle distressing emotions at 'the source'. This might mean that there are less drivers for emotion-focused coping such as social support seeking and peer cohesion.

There may be several reasons for the limited change in some capabilities or resources with training. In this sample, optimism was relatively high when first measured, and so may not have increased substantially following the training. In addition, given the relatively short length of the study, there may not have been sufficient time for the capabilities taught in the later seminars to change substantially. Further, as previously mentioned training in mindfulness and psychological flexibility may have reduced the need for using external coping strategies, such as turning to social support.

However, resilience appeared to increase alongside both mindfulness and psychological flexibility and as such, it is possible that both capabilities underlie high resilience. However, with the present dataset, it was not possible to determine causal relations among the variables. While our study revealed a clear pattern of growth among these three variables following training, the conclusions of this study could be strengthened

through a research design that included a non-intervention (control) group. Such a study would also need to incorporate a longitudinal design that tracked individuals through different developmental studies. Masten's (2001) Project Competence is an excellent example of the time length that is required for properly understanding the development of resilience. This study followed a cohort of 250 participants over twenty years. This time scale enabled researchers to monitor how participants' resilience was maintained in the face of adverse life events. Further studies could also investigate the extent to which employees' evaluations of the training quality influence their participation and subsequent use of the techniques taught in the seminars. Moreover, long-term employee outcomes could be examined, such as job performance, satisfaction, organizational commitment, absenteeism, turnover, as well as the sustainability of increased resilience.

In addition, given that the study involved a non-clinical population of workers in stable employment, these people may already possess many of the capabilities that were taught in the seminars. It should be noted that the seminar attendees were self-selected, and may therefore have represented a group who wished to improve already strong capabilities. Good levels of resilience and insight might also have contributed to the cohorts' initial request for this training programme. Future attempts to replicate this study using a more diverse sample of employees drawn from several organizations would be useful, and monitoring behavioural change over a longer time scale would be useful. Future studies could also employ an organizational-wide assessment of psychological capabilities before the training, to determine how a wider range of capabilities may be influence by training.

In conclusion, this exploratory project suggests that employee resilience can be increased via structured training around a set of positive psychological capabilities. In particular, mindfulness and psychological flexibility show commensurate increases with resilience. Mindfulness and psychological flexibility are 'self-generated strategies', and their use is not dependent on external circumstances such as changed

leadership, job characteristics or peer cohesion. This is not to advocate mindfulness or psychological flexibility as a substitute for tangible action in the workplace, rather that these are helpful strategies in maintaining psychological well-being where there is limited opportunity for control available to employees (i.e., job insecurity, organisational change or changes in one's direct supervisor or work colleagues). Finally at an estimated cost of $338.50 per staff member, this is considerably cheaper than the average direct costs associated with a stress claims.

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